



Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

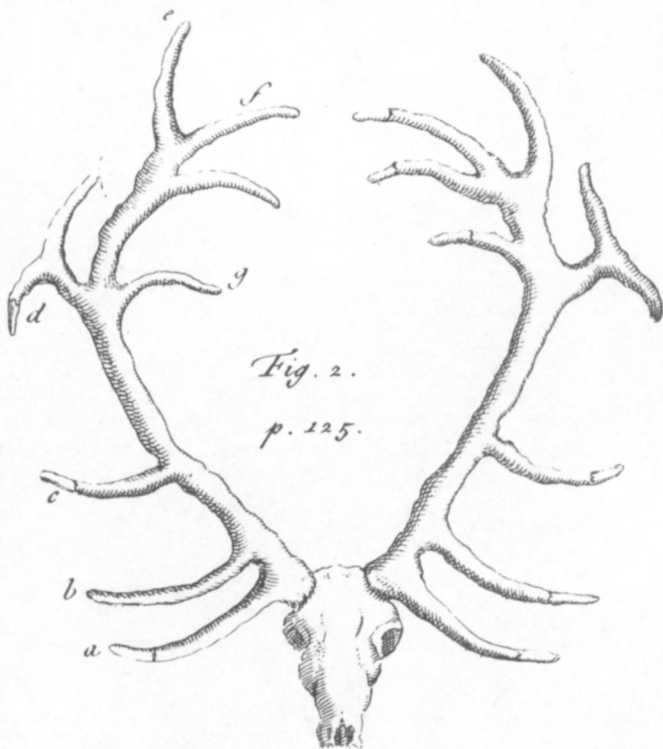


Fig. 2.
p. 125.



E

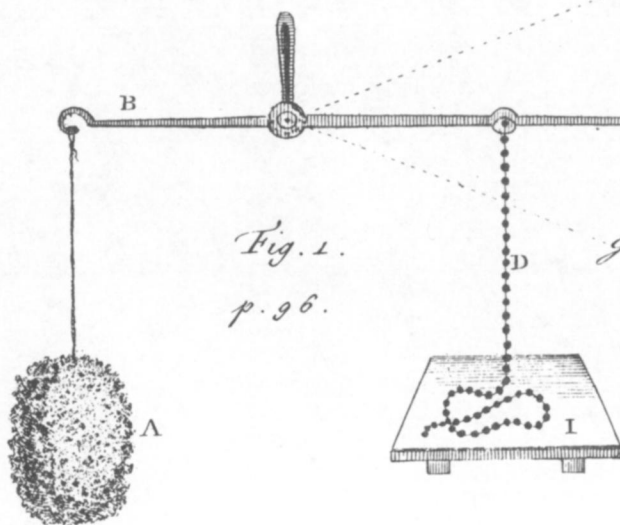
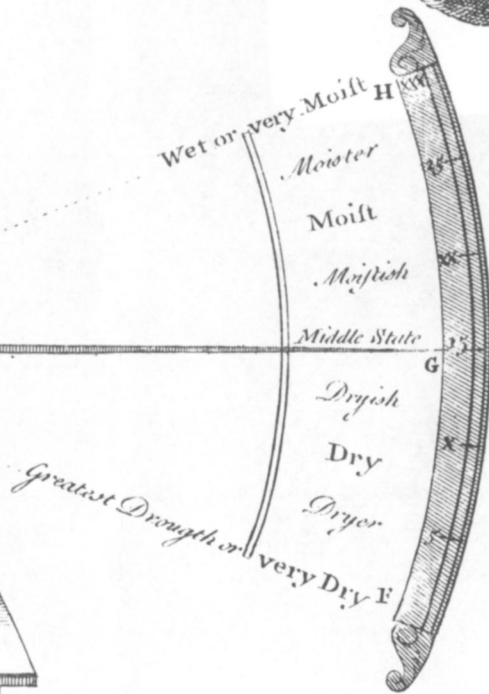
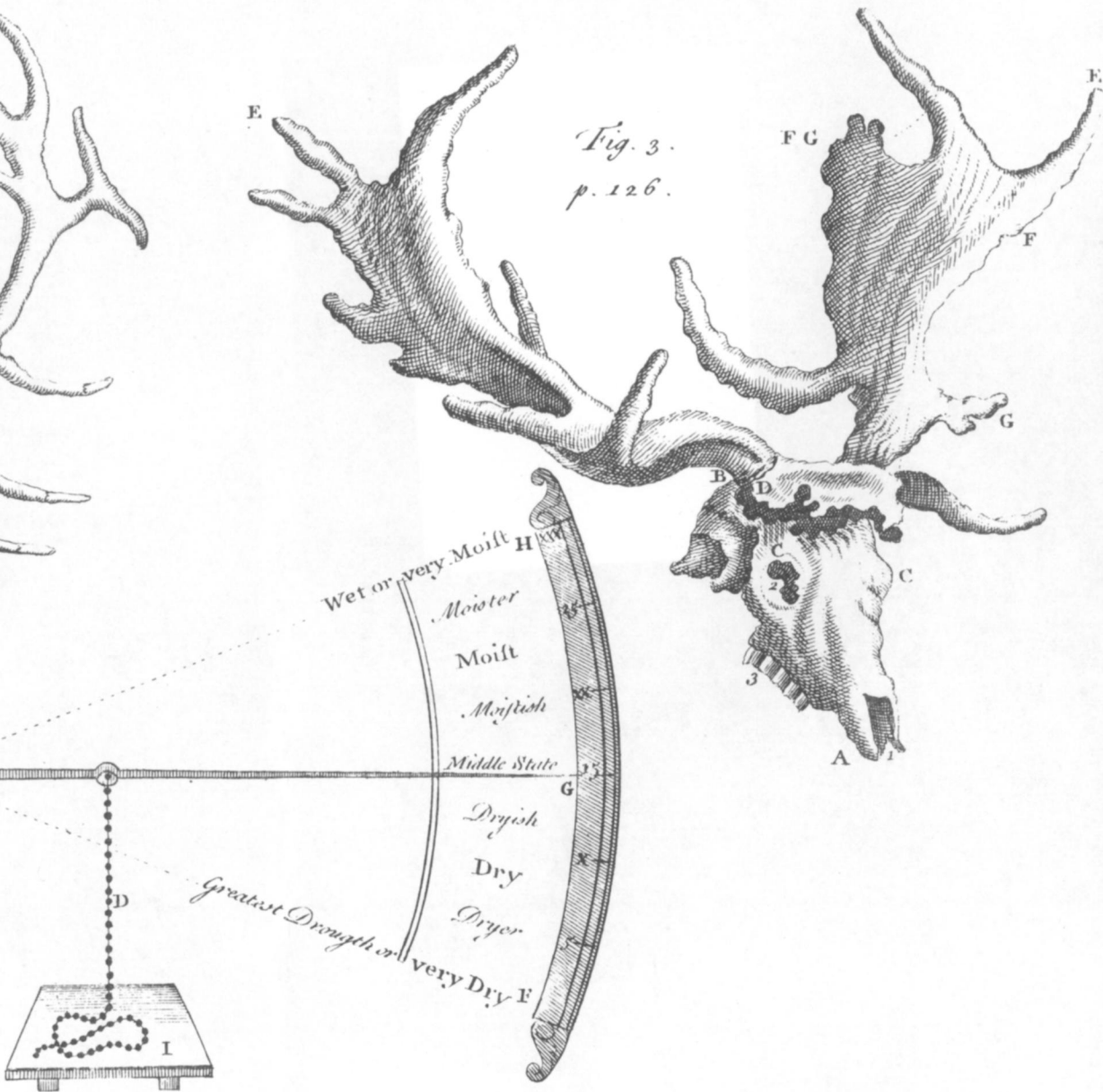


Fig. 1.
p. 96.



*Fig. 3.
p. 126.*



I. *Extract of a Letter from Mr. William Arderon F. R. S. to Mr. Henry Baker, F. R. S. with the Description of an improved Hygroscope.*

Dear Sir,

Read Feb. 27. 1745-6. **T**HE great Mr. *Boyle* has taken much Pains to bring the Hygrometer to Perfection; and Mr. *Roger Pickering*, one of your ingenious Members, has * lately made an Improvement to it: But, as the Instrument I use differs from them both, I shall beg Leave to describe it to you.

Some Years ago I applied my Thoughts to consider the Nature of Hygroscopes, and compared many different Sorts together, in order to determine which I might employ with the greatest Certainty; when none appeared to me to come nearer the Truth than that recommended by Mr. *Boyle*, of weighing a Piece of Sponge in a Pair of Gold Scales. But the Difficulty and Time, which I found, upon Trial, were requisite to adjust the Weights, and discover the true State of the Air, set me upon contriving another Method, whereby at all Seasons I might perceive, by Inspection only, the most minute Alterations with respect to Moisture or Dryness; and the following Drawing will, I believe, sufficiently describe what I found most effectual for that Purpose.

T A B.

* See *Phil. Transf.* n. 473.

TAB. I. *Fig. I.*

A represents a thin Piece of Sponge, so cut as to contain as large a Superficies as possible. This hangs by a fine Thread of Silk, upon the Beam *B*, and is exactly balanced by another Thread of Silk at *D*, strung with the smallest Lead-Shot, at equal Distances, and so adjusted as to cause the Index *E* to point at *G*, in the Middle of the graduated Arch *F, G, H*, when the Air is in a middle State between the greatest Moisture and the greatest Dryness.

I. shews a little Table or Shelf, for that Part of the Silk and Shot which is not suspended, to rest upon.

More Words are, I believe, unnecessary ; and therefore I only beg you'll believe me,

Yours, &c,

Feb. 15. 1745.

W.. Arderon.

II. *A Letter from ——— to Mr. John Elliot, F. R. S. of weighing the Strength of Electrical Effluvia.*

S I R,

*Read March 6.
1745-6.*

AS you were the first, and indeed the only Person who ever shew'd me any electrical Experiments, and have been so kind, according to your wonted Candour, to assist me freely upon this and all other like Occasions ; I think it proper to give you this first Account of what I have thought